

DUBROVSKIY, V.G.; KRAMARENKO, G.V.; MAMEDOV, M.

Magnetic observations in Ashkhabad. Trudy Fiz.-tekhn. inst. AN Turk.
SSR 7:143-155 '61. (MIRA 15:2)
(Ashkhabad--Magnetic measurements)

NAMEDOV, M.K.; KIREYEV, V.F.

Reasons for changes in the logging characteristics of sediments of
the Supra-Kirmaki arenaceous and Sub-Kirmaki series of the Peschanyy
Island field. Azerb. neft. khoz. 39 no.3(405):5-8 Mr '60.
(MIRA 14:9)

(Peschanyy Island--Oil well logging)

~~MAMEDOV, M.K.~~; MAMEDOV, B.M.; KULIYEV, I.P.; SAMEDOV, F.I.

Offshore oil fields are the creation of the Soviet Azerbaijan.
Azerb. neft. khoz. 39:20-23 Ap '60. (MIRA 13:11)
(Azerbaijan--Oil well drilling, Submarine)

MAMEDOV, M.K.; KIRYEV, V.F.

Geophysical data on the Supra-Kirmaki sand series in the Karadag field.
Azerb.neft.khoz. 37 no.12:1-4 D '58. (MIRA 12:3)

(Apsheron Peninsula--Petroleum geology)
(Apsheron Peninsula--Gas, Natural--Geology)
(Prospecting--Geophysical methods)

MAMEDOV, M.K.; KIREYEV, V.F.

Balakhan' series in the eastern wing of the Karadag fold and its
oil potential. Azerb. neft. khoz. 37 no.9:1-3 S '58.

(MIRA 11:12)

(Apsheiron Peninsula--Petroleum geology)

MAMEDOV, M.

Anomalous magnetic field of igneous rocks on the Krasnovodsk Peninsula. Izv. AN Turk. SSR no.5:120-126 '57. (MIRA 10:10)

1. Institut fiziki i geofiziki AN Turkmenskoy SSR.
(Krasnovodsk Peninsula---Rocks, Igneous)
(Magnetism, Terrestrial)

MAMEDOV, M.

Magnetic properties of rocks in Krasnovodsk District. Izv.
AN Turk.SSR no.2:23-29 '57. (MLRA 10:5)

1. Institut fiziki i geofiziki AN Turkmenkoy SSR.
(Krasnovodsk District--Rocks--Magnetic properties)

MAMEDOV, M.

Magnetic properties of rocks in Krasnovodsk District. Izv. AN Turk.
SSR no.1:15-21 '57. (MLBA 10:4)

1. Institut fiziki i geofiziki AN Turkmenskoy SSR,
(Krasnovodsk District--Rocks--Magnetic properties)

ALIYEV, R.K.; ISMAYLOV, A.I.; RAKHIMOVA, A.Kh.; MAMEDOV, M.I.

Medicinal forms and drugs prepared from naphthalan. Apt. delo
14 no.5:26-36 S-O '65. (MIRA 18:11)

1. Azerbaydzhanskiy meditsinskiy institut imeni N. Narimanova i
Bakinskiy zavod meditsinskikh preparatov.

S/081/62/000/023/054/120
B124/B101

AUTHORS: Mamedov, M. I., Khanlarova, A. G., Kyazimova, N. N.
TITLE: Protection of measuring instruments against corrosion by
marine atmosphere with the aid of the volatile inhibitor NDA
PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 411, abstract
231335 (Azerb. neft. kh-vo, no. 4, 1962, 43-45)

TEXT: The protective action of NDA (dicyclohexylammonium nitrate) on the corrosion of steel 3 in marine atmosphere was studied. It has been established that NDA effectively protects steel in marine atmosphere with 90-95% relative humidity. The distance between the NDA source and the surface to be protected should be ≤ 25 cm. The life of timekeeping instruments in marine atmosphere is nearly doubled, when the NDA content is 0.14 g/l air. [Abstracter's note: Complete translation.]

Card 1/1

KHANLAROVA, A.G.; MAMEDOV, M.I.

Studying the effectiveness of volatile inhibitors in humid
marine atmosphere. Azerb. neft. khoz. 41 no.12:43-44 D '62.
(MIRA 16:7)

(Inhibition(Chemistry))

MAMEDOV, M.I.; KHANLAROVA, A.G.; KYAZIMOVA, N.N.

Using the dicyclohexylamine nitrite volatile inhibitor for
protecting measuring instruments from atmospheric sea-water
corrosion. Azerb.neft.khoz. 41 no.4:43-45 Ap '62. (MIRA 16:2)
(Measuring instruments—Corrosion)
(Dicyclohexylamine nitrite)

KHANLAROVA, A.G.; NEGREYEV, V.F.; NAZIROV, R.K.; MAMEDOV, M.I.

Steel corrosion under the conditions in the Caspian Sea. Azerb.
neft. khoz. 39 no.3(405):43-45 Mr '60. (MIRA 14:9)
(Caspian Sea--Steel--Corrosion)

NEGREYEV, V.F.; KHANLAROVA, A.G.; ZNAYCHENKO, S.G.; MAMEDOV, M.I.

Results of the four-year testing of offshore zinc coated piles.
Azerb. neft, khoz. 38 no.6:48 Je '59. (MIRA 12:10)
(Piling (Civil engineering))

MAMEDOV, M.I.

KHANLAROVA, A.G.; MAMEDOV, M.I.

Determining the stability of cold bituminous coatings on offshore
oil field structures [in Azerbaijani with summary in Russian].

Azerb. neft. khoz. 36 no.12:36-38 D '57.

(MIRA 11:3)

(Bitumen)

(Protective coatings)

L 28514-66

ACC NR: AR6000074

that required for the breakdown of thin dielectric films. This indicates the importance of impact ionization and the development of electron avalanches. The oscillograms registered repeated short-period breakdown of selenium rectifiers, after which the properties of the rectifiers were restored. Refs.: 17. (Translation of abstract) (S.A.)

SUB CODE: 09/ SUBM DATE: none

Cord 2/2 CC

28514-66 EWT(1)

ACC NR: AR6000074

SOURCE CODE: UR/0275/65/000/009/B020/B020

AUTHOR: Efendiyev, A. Z.; Zhokhov, V. Z.; Manadov, M. G.; Dzhamalova, A. S.

TITLE: Investigation of pulse breakdown in semiconductor rectifiers

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 9B153

REF SOURCE: Sb. Proboy dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 315-318

TOPIC TAGS: selenium rectifier, semiconductor rectifier, dielectric breakdown, germanium semiconductor

ABSTRACT: The results of experimental investigations of pulse breakdowns of cuprous oxide, selenium, and point-contact germanium rectifiers are discussed in detail. It is shown that the time required for breakdown of cuprous oxide rectifiers is 0.4 to 12 μ sec at a field strength of $(1.46 \text{ to } 2.56) \cdot 10^6 \text{ v/cm}$; for the selenium rectifiers, 4 to 42 μ sec at $(6 \text{ to } 11.5) \cdot 10^5 \text{ v/cm}$; and for germanium rectifiers, $\sim 1 \mu$ sec. The resistance of the rectifier slows down the breakdown process. After the breakdown, all the volt-ampere characteristics have drop regions. The relationship between the time required for development of breakdown and the field strength is similar to that between the time required for development of gas avalanches and the field strength. The time required for rectifier breakdown is of the same order as

Card 1/2

L 42950-66 EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/AT

ACC NR: AR6015889

SOURCE CODE: UR/0275/65/000/012/B003/H003

AUTHOR: Mamedov, M. G.

TITLE: Breakdown forming time in semiconductors

SOURCE: Rdf. zh. Elektronika i yeye primeneniye, Abs. 12B25

REF SOURCE: Sb. aspirantsk. rabot. Dagestansk. un-t. Yestestv. i fiz.-matem. n. Makhachkala, 1964, 101-108

TOPIC TAGS: semiconductor single crystal, germanium semiconductor, volt ampere characteristic, impact ionization

ABSTRACT: An investigation was made of the breakdown of Ge single crystals under the effect of single voltage pulses with a front of 10^{-8} sec when the voltage gradually increases to breakdown voltage. ¹⁸Sb-alloyed specimens of Ge with a carrier concentration of $1-4 \cdot 10^{15} \text{ cm}^{-3}$ were used. The breakdown forming time for Ge varied from 10^{-6} sec at $7 \cdot 10^3$ v/cm to 10^{-8} sec at 10^4 v/cm. The time of the formation of a channel along which the breakdown occurs varied in the range of $0.3-0.5 \cdot 10^{-6}$ sec for specimens ~ 1 mm thick. On the basis of an analysis of the volt-ampere characteristics, the possibility of impact ionization with the formation of electron avalanche may be inferred. [Translation of abstract] M. B.

SUB CODE: 20
Card 1/1 MLP

UDC: 539.293:546.289

L 42955-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AR6015871

SOURCE CODE: UR/0275/65/000/012/B021/B021

AUTHOR: Efendiyev, A. Z.; Mamedov, M. G.

TITLE: Investigation of pulse breakdown of germanium diodes

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 12B158

REF. SOURCE: Sb. aspirantsk. rabot. Dagestansk un-t. Yestestv. i fiz.-matem. n. Makhachkala, 1964, 93-99

TOPIC TAGS: germanium diode, volt ampere characteristic, pulse oscillator

ABSTRACT: Pulse inverse voltage was supplied from a special oscillator to a type D2-D point-contact germanium diode. The magnitude of the current pulse through the diode and the voltage drop on it were determined by means of an oscillograph. The totality of these values at different magnitudes of the pulse of the oscillator determined the volt-ampere characteristics of the diode. A characteristic was obtained with a section of negative differential resistance. The time of the development of the breakdown was determined ($\sim 10^{-8}$ sec). [Translation of abstract] Bibliography of 6 titles. Abstractor's note. There are no data in the article pertaining to the experiment: pulse front duration, repetition frequency, etc. The interpretation of some of the results of the experiment gives rise to doubt. L. L.

SUB CODE: 20 92

UDC: 621.382.2:546.289

MAMEDOV, M.G.

Time of formation of a breakdown in semiconductors. Izv. AN Azerb.
SSR. Ser. fiz.-mat. i tekhn. nauk no.5:79-84 '63. (MIRA 17:3)

MAMEDOV, M. D., kapitan meditsinskoy sluzhby

Treatment of pyoderma with streptomycin ointment. Voen.-med.
zhur. no.12:73 D '61. (MIRA 15:7)

(SKIN--DISEASES) (STREPTOMYCIN)

MAMEDOV, M.D.

Clinical aspects and treatment of tung nut poisoning. Azerb. med.
zhur. no. 3:74-75 Mr '61. (MIRA 14:4)
(TUNG NUT---TOXICOLOGY)

HAJSEDOV, E.A.

New tea varieties in Azerbaijan. Dokl. Ak. Azerb. SSR 20 no. 7:164-167/164.
1975 164

MAMEDOV, M.A.

Improvement of the orbital elements of the planet Florentina (321).
Izv. AN Azerb. SSR. Ser. fiz.-mat. i tekhn. nauk no.6:93-96 '63.
(MIRA 17:3)

MAMEDOV, M.A., kand.sel'skokhoz. nauk

Artificial additional pollination of tea plants in the subtropics
of the Azerbaijan S.S.R. Agrobiologia no.4:506-510 J1-Ag '63.
(MIRA 16:9)

1. Lenkoranskiy filial Azerbaydzhanskogo nauchno-issledovatel'skogo
instituta sadovodstva, vinogradstva i subtropicheskikh kul'tur.
(Lenkoran Lowland--Tea breeding)

DZHANASHIYA, A.A.; MAMEDOV, M.A.

Growth of tea sprouts as dependent on the age of the shrubs
and the cultivation practices used. Dokl. AN Azerb. SSR
18 no.5:37-40 '62. (MIRA 15:7)

1. Institut sadovodstva, vinogradarstva i subtropicheskikh
kul'tur AN AzSSR. Predstavleno akademikom AN AzSSR I.D. Mustafayevym.
(Azerbaijan--Tea)

MAMEDOV, M.A., kand.sel'skokhozyaystvennykh nauk

First results of testing Georgian improved tea varieties in the
subtropical areas of Azerbaijan. Agrobiologiya no.4:518-524
Jl-Ag '62. (MIRA 15:9)

1. Azerbaydzhanskiy nauchno-issledovatel'skiy institut sadovodstva,
vinogradarstva i subtopicheskikh kul'tur, Lenkoranskiy filial.
(AZERBAIJAN--TEA--VARIETIES)

MAMEDOV, M.A., kand.sel'skokhoz.nauk

Tea breeding in Azerbaijan. Agrobiologiya no. 1:62-67 Ja-F '61.
(MIRA 14:2)

1. Lenkoranskiy filial Azerbaydzhanskogo instituta sadovodstva,
vinogradarstva i subtropicheskikh kul'tur.
(Azerbaijan--Tea breeding)

L 01806-67 EWT(m)/T DJ

ACC NR: AP6030589 (AN) SOURCE CODE: UR/0413/66/000/016/0073/0073 44

INVENTOR: Ismailov, R. G. A. O.; Mamedov, M. A. A. O.; Spektor, Sh. Sh.; Seidov, M. M. M. O.; Vartapetov, A. A.; Shchelkonogov, I. A.; Kyazimov, A. A. O.; Aliyev, A. A. G. O.; Tangiyeva, T. A.; Kesel'man, L. G.; Lobanov, V. V.; Chikunov, V. A.; Blidchenko, I. F.; Tarumov, G. A.; Bombandirov, P. P.; Merkur'yev, G. D.; Petrov, S. A.

ORG: none

TITLE: Lubricating oil for bushings. Class 23, No. 184997

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 73

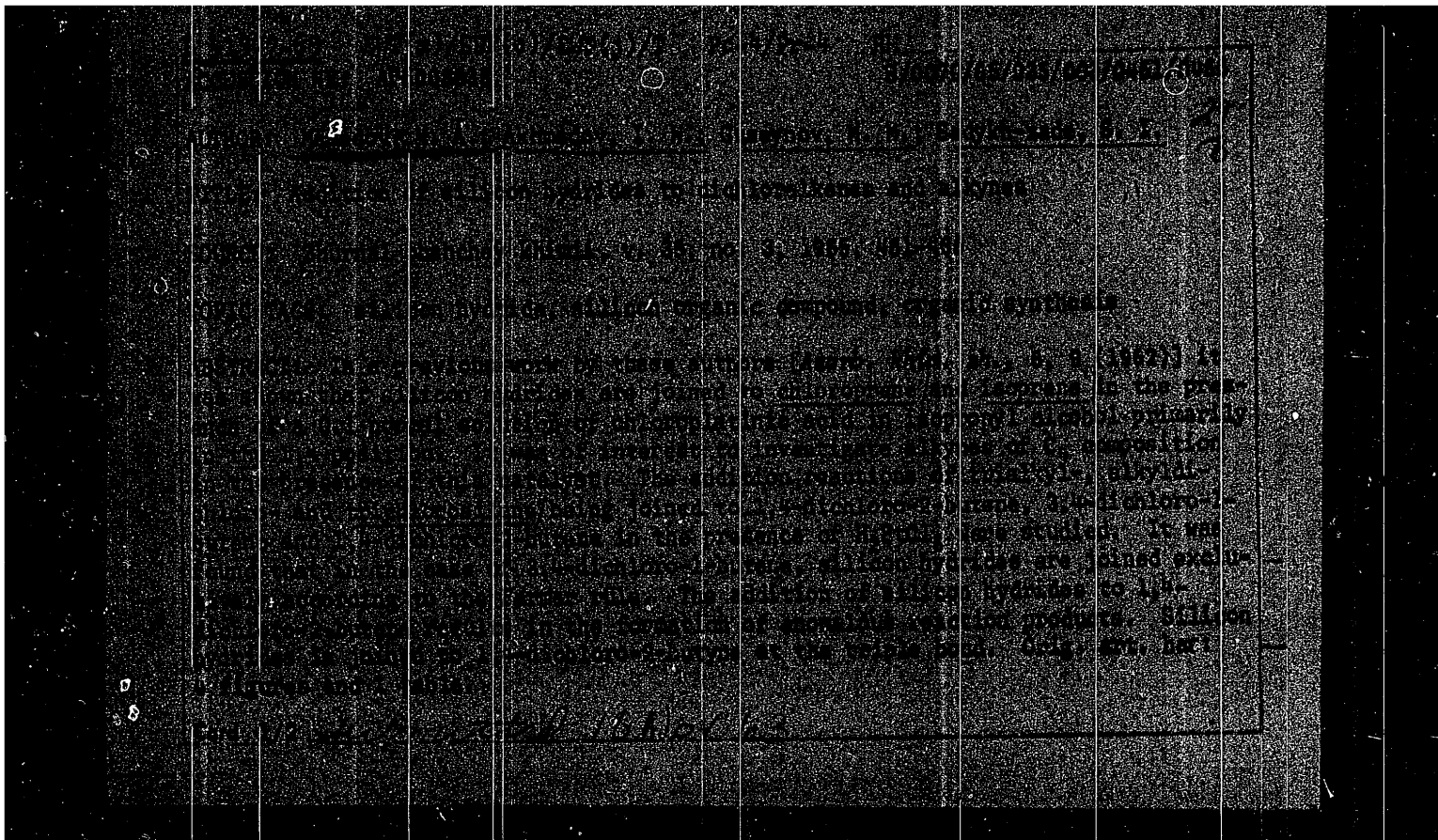
TOPIC TAGS: lubricant, bushing, petroleum

ABSTRACT: An Author Certificate has been issued describing a lubricant for bushings, with a solar fraction and mazut base. To expand the operating temperature range of the oil, a petroleum fraction with a boil-away of 4—5% at 240—320C is added to the lubricant. This fraction is obtained from the petroleum distillate at 300—310C. [Translation] [NT]

SUB CODE: 11/ SUBM DATE: 05Nov64/

Card 1/1 UDC: 629.11.012.26

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000013-6



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000013-6

ANDRIANOV, S.L.; NAMEDOV, M.A.

Petroleum recovery from layers with gas caps as exemplified by the horizon in the ~~Kirmaki~~ Series of the Kala field. Neftprom. delo no.7:6-9 '65. (MIRA 18:9)

1. Neftpromyslovoye upravleniye "Azirbekovneft" i Azerbayizanskiy nauchno-issledovatel'skiy institut po dobyche nefti.

AKHMEIDOV, I.M.; MAMEDOV, M.A.

Addition of silicon hydrides to chlorins-containing bicyclic hydrocarbons. Dokl. AN Azerb. SSR 20 no. 6:29-32 '64.
(MIRA 17:9)

1. Institut neftekhimicheskikh protsessov im. Yu.G.Mamedaliyeva AN AzerSSR. Predstavleno akademikom AN AzerSSR A.M.Kuliyevym.

ISMAILOV, R.G.; MAMEDOV, M.A.; SPEKTOR, Sh.Sh.; IVANOVA, L.V.;
KORNEYEV, M.I.; SULTANOV, Z.A.; SHCHELKONOGOV, I.A.

Petroleum refining industry of Azerbaijan on the threshold of
a glorious jubilee. Khim. i tekhn. topl. i masel 9 no.11:15-19
N '64 (MIRA 18:1)

L 12401-63

ACCESSION NR: AP3001668

diesel fuels containing as much as 1.2% of sulfur in their composition and to a large extent improves its wetting ability. An industrial production of BFK based on the original data has been proposed. Orig. art. has: 5 tables. 2

ASSOCIATION: INKEP AN AESSR

SUBMITTED: 00

DATE ACQ: 08Jul63

ENCL: 00

SUB CODE: none

NO REF SQ: 000

OTHER: 000

Card 2/2

L 12401-63
RD/EM/WW/MR

SWP(j)/EFF(c)/EWT(m)/BDS AFFTC/ASD/APGO Po-4/Pr-4

ACCESSION NR: AP3001668

S/0065/63/000/006/0024/0028

AUTHOR: Kuliyev, A. M.; Zeynalova, G. A.; Abdinova, A. B.; Kafarova, U. Ya.;
Sulaymanova, F. G.; Mamedov, M. A. 77
75

TITLE: Preparation of multifunctional additive based on condensation products
of alkylphenol with formaldehyde

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 6, 1963, 24-28

TOPIC TAGS: Fuel additives, physicochemical properties, formaldehyde, alkylphenol

ABSTRACT: The investigation of a multifunctional additive by the condensation reaction of formaldehyde with alkylphenol and its comparison to other existing additives has been completed. In the process of investigation it was established that the use of highly effective multifunctional additives in fuels is more economical and since all the functional groups are concentrated into one molecule, the elimination of these additives is rapid as a result of its chemical interaction with the metals at contact or adsorption to the metal surface. The composition of the synthesized barium salt of the condensation alkylphenol and formaldehyde products (BPK) with other combination additives showed that the BPK additive is more superior to other additives. It prevents corrosion of the

Card 1/2

ISMAILOV, R.G.; MAMEDOV, M.A.; SPEKTOR, Sh.Sh.

Increasing the production capacities of units in petroleum refineries
of Azerbaijan. Khim.i tekhn. topl. i masel 7 no.11:5-7 N '62. (MIRA 15:12)
(Azerbaijan—Petroleum refineries—Equipment and supplies)

KASUMZADE, N.G.; TER-SAAKOV, B.U.; MAMEDOV, M.A.; ARAKELOV, A.S.;
SPEKTOR, Sh.Sh.; NEGREYEV, V.F., red.; ZEYNALOVA, T.Z.,
red. izd-va; AKHMEDOV, S., tekhn. red.

[Protection of apparatus and equipment of petroleum re-
fineries from corrosion] Zashchita apparatury i oborudovaniia
neftepererabatyvaiushchikh zavodov ot korrozii. [By] N.G.
Kasumzade i dr. Baku, Azerneshr. 1962. 282 p. (MIRA15:9)
(Petroleum refineries--Equipment and supplies)
(Corrosion and anticorrosives)

ISMAYLOV, R.G.; MAMEDOV, M.A.; ALIYEV, V.S.

Develop the petroleum refining industry in Azerbaijan. Azerb. нефт.
khoz. 39:24-25 Ap '60. (MIRA 13:11)
(Azerbaijan--Petroleum--Refining)

MAMEDALIYEV, Yu.G.; MAMEDOV, Mageram; GUSEYNOV, M.M.; SHARIFOVA, M.R.;
MEKHTIYEVA, F.A.

Synthesis of vinyl chloride by the chlorination of ethylene in a
fluidized catalyst bed. Dokl. AN SSSR. 144 no.6:1309-1311 Je
'62. (MIRA 15:6)

1. Institut neftekhimicheskikh protsesov Akademii nauk Azer-
baydzhanskoy SSR.
2. Cheln-korrespondent Akademii nauk SSSR (for Mamedaliyev).
(Ethylene) (Chlorination) (Fluidization)

Alkylation of toluene with the...

S/081/62/000/013/045/054
B156/B101

to reacted toluene. The octane number of the 120-180°C fraction was 99.8, and with 3.3 g of tetraethyl lead it was 105.2. The fraction obtained can be used as a high-octane component of gasoline, also as a raw material for petrochemical synthesis. [Abstracter's note: Complete translation.]

Card 2/2

40198

S/081/62/000/013/045/054
B156/B101

11.0122

AUTHORS: Mamedov, M. A., Gamid-Zade, G. A., Mil'man, V. M.

TITLE: Alkylation of toluene with the propane-propylene fraction of catalytic cracking gas

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 13, 1962, 534, abstract 13M216 (Novosti نفت. i gaz. tekhn. Neftepererabotka i neftekhimiya, no. 10, 1961, 7-10)

TEXT: Experiments on the alkylation of coal-tar toluene, using the propane-propylene fraction of catalytic cracking gas in the presence of dehydrated $AlCl_3$ as catalyst, were carried out at atmospheric pressure in a laboratory apparatus in order to determine the ideal yield of the alkylate produced, and its anti-detonation properties. It was established that the ideal conditions for formation of the required 120-180°C fraction are: temperature 75°C, toluene: propylene: $AlCl_3$ molecular ratio

1:0.5:0.035, contact period 0.64 min. Under these conditions the yield of the fraction was: 206.3 % with respect to propylene, 106.4 % with respect

Card 1/2

3/081/62/000/009/057/075
B166/B144

AUTHOR: Lamedov, A. A.

TITLE: Experience in mastering the industrial plant for the synthesis of the additive aznii-7 (aznii-7)

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 9, 1962, 525, abstract 9M269 (Sb. "Prisadki k maslam i toplivam". M., Gostoptekhnizdat, 1961, 155 - 156)

NOTE: Steps taken at the industrial plant for the synthesis of the aznii-7 additive (erected by the Azneftekhimzavody directorate in 1960 according to the project of the Giproazneft' institute) to eliminate the difficulties arising in the operation of the plant are examined. Additive aznii-7 substantially improves the operational qualities of diesel oils.
[Abstracter's note: Complete translation.]

Card 1/1

Synthesis, investigation and ...

S/081/62/000/008/043/057
B156/B101

additives are given. [Abstracter's note: Complete translation.]

1B

Card 2/2

S/081/62/000/008/043/057
B156/B101

119700
AUTHORS:

Kuliyev, A. M., Sadykhov, K. I., Mamedov, M. A.

TITLE:

Synthesis, investigation and uses of sulfonate additives for lubricating oils

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 8, 1962, 483-484,
abstract 8M210 (Sb. "Prisadki k maslam i toplivam". M.,
Gostoptekhnizdat, 1961, 48-58)

TEXT: Several salts of alkyl aromatic hydrocarbon sulfo acids were synthesized and the effectiveness of their action on oils studied in relation to molecular weight, structure and the nature of the metal included in their composition. As well as Ca- and Ba-salts, Co-, Pb-, Sr-, and Cu-sulfonates of sulfonated benzene were produced and investigated. It is proved that the greater the number of carbon atoms in the alkyl side chain of the sulfonates, the better their cleansing properties. It is shown that increase in their molecular weight improves the depressant properties of the synthesized sulfonates. The results of laboratory experiments made on oils with sulfonate additives and on oils with sulfonate and anti-oxidizing

Card 1/2

✓B

CHERNOZHUKOV, N.I., doktor tekhn. nauk, prof., nauchnyy red.;
ZHERDEVA, L.G., red.; IVANOVA, L.V., red.; ISAGULYANTS, V.I.,
red.; ISMATLOV, R.G., red.; KREYN, S.E., red.; KULIYEV, A.M.,
red.; MAMEDOV, M.A., red.; PAPOK, K.K., red.; SPENTOR, Sh.Sh.,
red.; FEDOTOVA, A.F., red.; SHKHIYAN, S.Kh., red.; LEVINA,
Ye.S., ved. red.; POLOSINA, A.S., tekhn. red.

[Improvement of the quality and the production of lubricating
oils] Uluchshenie kachestva i sovershenstvovanie proizvodstva
smazochnykh masel; trudy. Moskva, Gostoptekhzdat, 1963. 255 p.
(MIRA 16:6)

1. Vsesoyuznoye soveshchaniye po uluchsheniyu kachestva bakin-
skikh smazochnykh masel i usovershenstvovaniyu tekhnologii ikh
proizvodstva, Baku, 1961.

(Lubrication and lubricants)

KULIYEV, A.M.; SADYKHOV, K.I.; MAMEDOV, M.A.

Synthesis and study of the SB-3 (barium sulfonate-3), a new
sulfonate additive to motortruck oils. Azerb.khim.zhur. no.6:
77-82 '60. (MIRA 14:8)
(Lubrication and lubricants--Additives) (Diesel fuels)

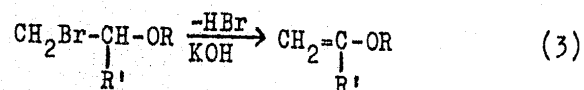
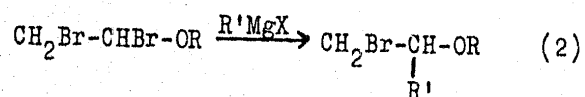
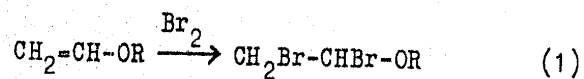
Investigations of Vinyl-substituted Ethers. Communication 1. SOV/62-59-9-19/40
Synthesis of α -Substituted Vinyl Ethyl Ethers

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk
SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of
the Academy of Sciences, USSR)

SUBMITTED: December 27, 1957

Card 3/3

Investigations of Vinyl-substituted Ethers. Communication 1. SOV/62-59-9-19/40
 Synthesis of α -Substituted Vinyl Ethyl Ethers



Nesmeyanov, Lutsenko, Vereshchagina (Ref 11) also obtained α -methyl vinylbutyl ether according to this scheme. The warming-up rate had a large influence on the reaction. The separation of HBr improved with slower heating. For the first time they obtained β -bromine- α -ethyl diethyl-ether, α -propylvinyl ethyl ether and α -isoamyl vinylethyl ether. The structure was proved. There are 1 table and 13 references, 7 of which are Soviet.

5 (3)

AUTHORS: Shostakovskiy, M. F., Mamedov, Mageram SOV/62-59-9-19/40

TITLE: Investigations of Vinyl-substituted Ethers. Communication 1.
Synthesis of α -Substituted Vinyl Ethyl Ethers

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1959, Nr 9, pp 1636 - 1639 (USSR)

ABSTRACT: There are two courses of synthesis for vinyl ether of the general
structure of $\text{CH}_2=\underset{\text{R}'}{\text{C}}-\text{OR}$ ($\text{R}, \text{R}' = \text{alkyl of the aryl}$)

a) condensation of the alcohols with alkyl acetylene, b) by separation of HBr from β -bromo alkyl ether. The following Soviet authors are mentioned in the course of discussing the appropriate publications: Favorskiy (Ref 1), Shostakovskiy and Gracheva (Ref 2), Petrov (Ref 9), Isagulyants and Maksimova (Ref 10). In the present paper the authors followed the second method and worked according to the following scheme:

Card 1/3

SOV/62-59-2-22/40

Investigations in the Field of Chemical Transformations in Unsaturated and High Molecular Weight Compounds. Communication 9. Copolymerization of Vinyl Isopropyl Ether With Methyl Ester of Acrylic Acid

was confirmed: On an increasing molar part of vinyl ether in the reaction medium the yields decrease, at the same time the number of chain links in the copolymer increases (Fig). It may be seen from it that the copolymers do not contain more than 50% of the chain links of vinyl ether. At considerable excess of vinyl isopropyl ether in the reaction medium copolymers with apparently regularly alternating chain links are thus formed (Ref 10). There are 1 figure, 2 tables, and 10 references, 9 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR) Institut khimii Akademii nauk AzSSR (Institute of Chemistry of the Academy of Sciences, Azerbaydzhanskaya SSR)

SUBMITTED: June 6, 1957
Card 2/2

5(3)

SOV/62-59-2-22/40

AUTHORS:

Khomutov, A. M., Mamedov, M. A.

TITLE:

Investigations in the Field of Chemical Transformations in Unsaturated and High Molecular Weight Compounds (Issledovaniya v oblasti khimicheskikh prevrashcheniy nepredel'nykh i vysokomolekulyarnykh soyedineniy). Communication 9. Copolymerization of Vinyl Isopropyl Ether With Methyl Ester of Acrylic Acid (Soobshcheniye 9. Sopolimerizatsiya vinilizopropilovogo efira s metilovym efirom akrilovoy kisloty)

PERIODICAL:

Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1959, Nr 2, pp 327-330 (USSR)

ABSTRACT:

In the present paper data on the copolymerization are given in which 95 mol % of vinyl ether (vinyl isopropyl) were used. The second more active monomer was the methyl acrylate (Ref 8). The copolymerization was investigated at unequal ratio of the initial monomers. Benzoyl peroxide and dinitrile of the azoisobutyric acid were used as initiators. The reaction lasted up to the maximum utilization of the initial monomers. As a result the following connection (Ref 9) between the concentration of the initial monomers, the composition and yield of copolymers

Card 1/2

MAMEDOV, MAGERAN ALI-OGLY

YEGORKIN, Nikolay Ivanovich; MAMEDOV, Mageran Ali-ogly; ROKHVARGER, Ol'ga
Davydovna; VOKKOV, V.A., retsuzent; TORNOZOVA, L.I., redaktor, KOGAN,
V.V., tekhnicheskiiy redaktor

[Formaldehyde tanning] Formal'degidnoe dublenie. Moskva, Gos.
nauchno-tekhn. izd-vo M-ya legkoi promyshl.SSSR, 1957. 159 p.
(Tanning) (Formaldehyde) (MLRA 10:7)

MAMEDOV, M.A., kandidat tekhnicheskikh nauk.

Tanning with melamine formaldehyde. Leg. prom. 15 no.6:27-28
Je '55. (MIRA 8:8)

(Tanning)

MAMEDOV, M.A.

YEGORKIN, N.I., professor; MAMEDOV, M.A., kandidat tekhnicheskikh nauk.

Producing white leather from pigskins by formaldehyde tanning. Leg.
prom.15 no.1:19 Ja '55. (MIRA 8:3)
(Leather industry)

MAMEDOV, M. A.

Determination of formaldehyde in leather. M. A. Mamedov. *Lepaya Plova*, 14, No. 12, 24-25 (1964). To determine the formaldehyde content in leather, cut leather in a 500 ml. Warris flask and 40 ml. 1N H₂SO₄ heat to decompose the leather, steam distill, and collect 500 ml. of distillate. Measure the final vol. of HCHO distillate and transfer 100 ml. to an Erlenmeyer flask. Add 10 ml. 1N NaOH and 20 ml. 0.1N iodine. Stopper and allow to stand in the dark for 15-20 min. Add 11 ml. 1N H₂SO₄ and titrate with 0.1N thiosulfate. Loss of HCHO in distillate is 5%. B. Z. Kamien

ILLEGIBLE

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000013-6

MAMEDOV, M. A.

Dissertation: "Commercial Properties of Leather Tanned With Formaldehyde." Cand Tech Sci, Moscow Inst of National Economy, Moscow, 1953. (Referativnyy Zhurnal--Khimiya, Moscow, No 4, Feb 54)

SC: SUM 243, 19 Oct 1954

L 04559-67 EWT(1) GN

ACC NR: AP6023948

SOURCE CODE: UR/0233/65/000/006/0057/0064

AUTHOR: Mamedov, M. A.

ORG: none

TITLE: Program for the calculation of a parabolic orbit by means of three observations, using the BESM-2 electronic computer

SOURCE: AN AzerbSSR. Izv. Ser fiz-tekhn i matem n, no. 6, 1965, 57-64

TOPIC TAGS: comet, orbit calculation, parabolic orbit, computer programming/ BESM-2 computer

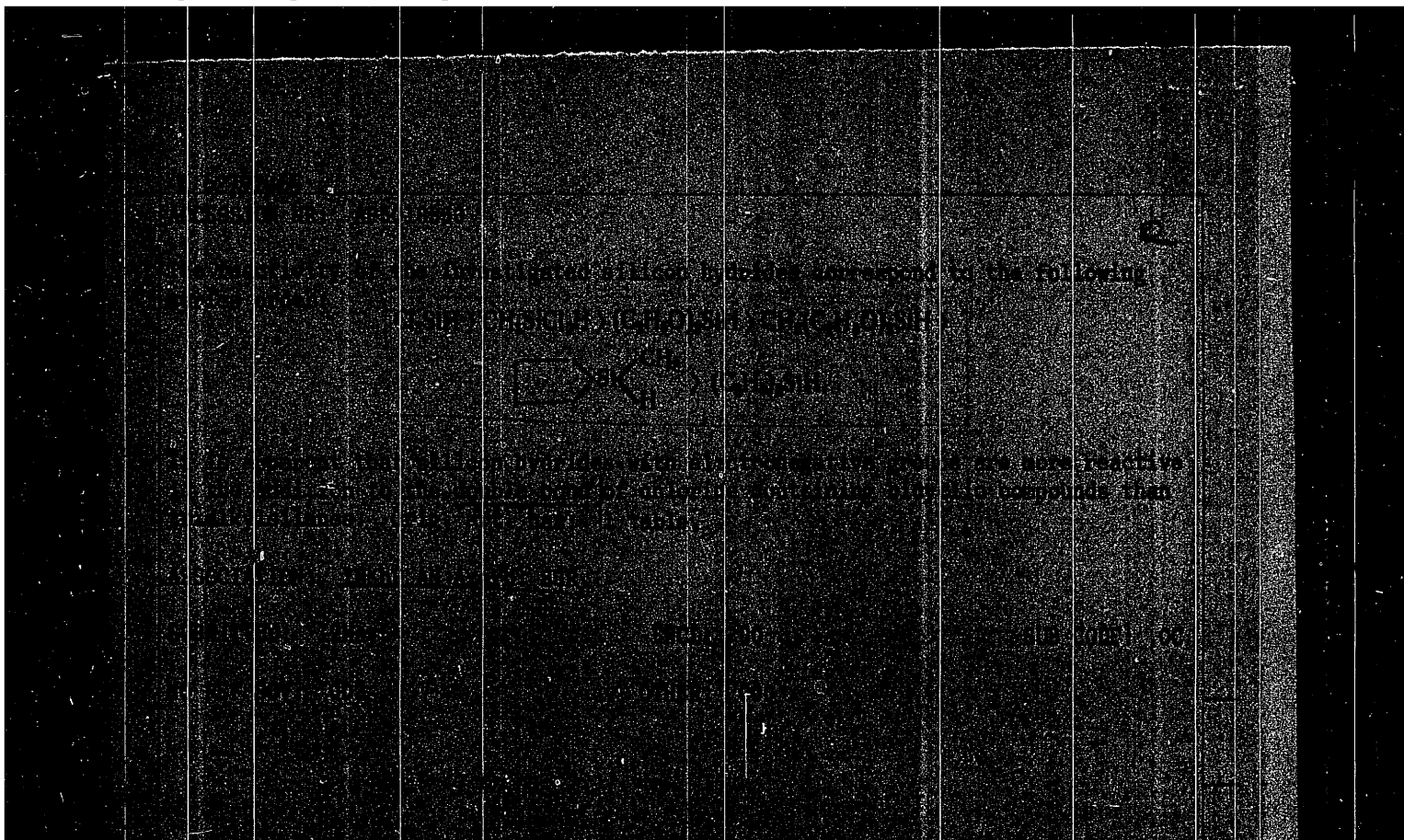
ABSTRACT: The main purpose of the investigation is to be able to determine the elements and the ephemerides of newly discovered comets and to facilitate the calculation by programming the problem for a computer. The calculation is based on the instants of three observations of the comet, the direct ascensions and declinations of the comet during these instants of time, and the corresponding coordinates of the sun. Parallax is disregarded. The parabolic orbit is determined by the Olbers method. The equations on which the program is based are derived and examples are presented of the calculation of orbits of several comets. Calculation with the electronic computer in accordance with this program, including calculation of the ephemerides for twelve instants, consumes not more than 1.5 minutes. The author thanks the scientific director, Doctor of Physicomathematical Sciences S. G. Makover, for valuable advice, and senior scientist of ITA, G. A. Merman. Orig. art. has: 1 figure and 16 formulas.

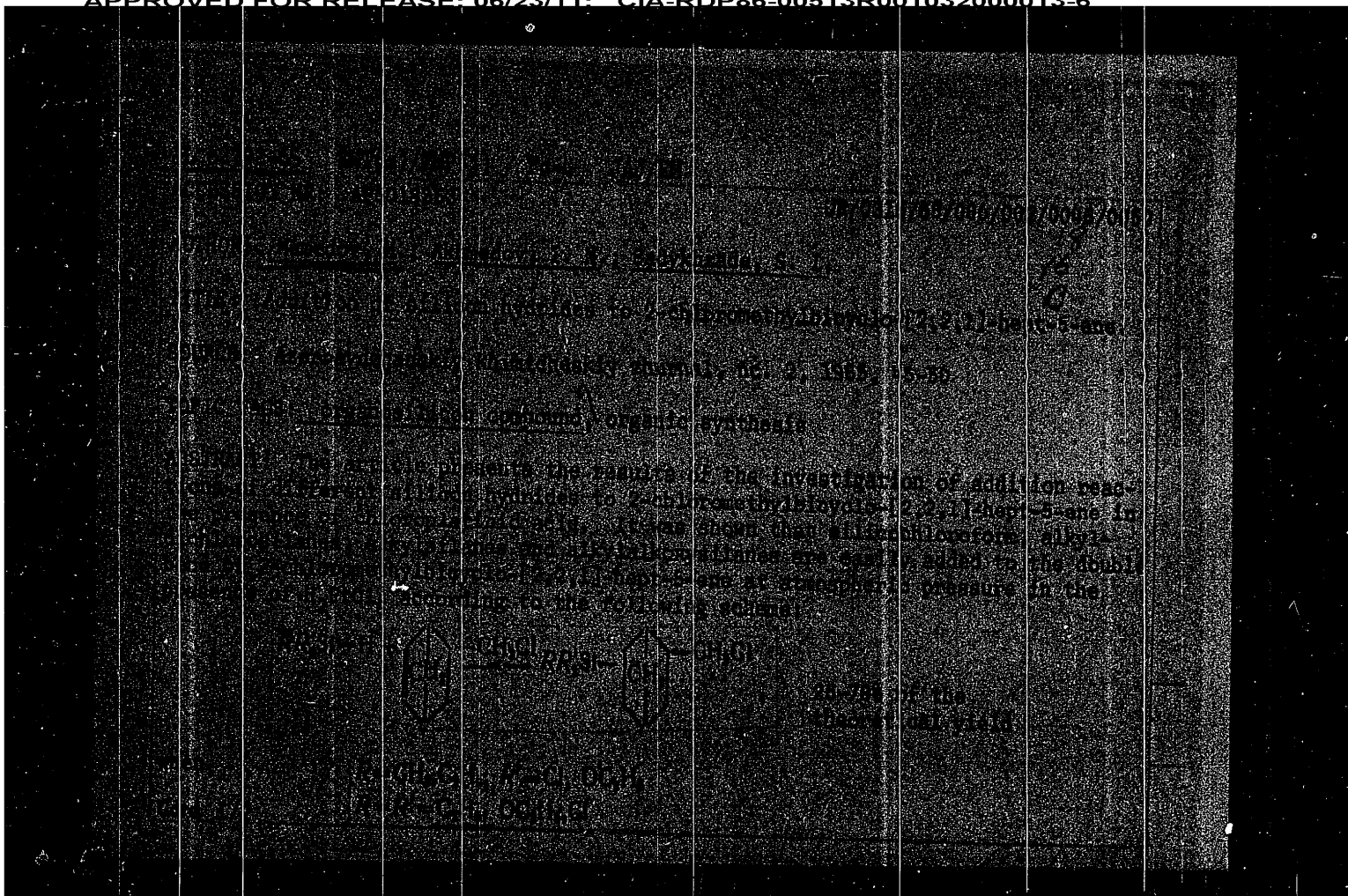
SUB CODE: 03, 12/ SUBM DATE: 00/ ORIG REF: 003

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45
8

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000013-6





MAMEDOV, M.; SADYKHZADE, S.I., red.

[Vinyl chloride] Vinilkhlorid. Baku. Zerneshr, 1964.
127 p. (MIRA 18:1)

SADYKHZADE, S.I.; MAMEDOV, Mageran; GASANOVA, F.A.

Synthesis of silicoolefin oxides by the addition of silane hydrides to
unsaturated halohydrins and their oxides. Azerb.khim.zhur. no.4:85-90
'63. (MIRA 17:2)

ALIYEV, N.; EYNALOV, A.; NASRULLAYEV, N.; MAMEDOV, A.; MAMEDOV, M.;
GADZHIYEV, P., pomoshchnik mastera; EL'DAROV, M., operator;
DERGACHEV, P., operator

A word from the petroleum workers of Peschanyy Island.
Neftianik 7 no.11:9 N '62. (MIRA 16:6)

1. Zaveduyushchiy morskim promyslom kommunisticheskogo truda
No.1 neftepromyslovogo upravleniya Peschanyyneft' (for Aliyev).
2. Sekretar' komiteta ~~Leninskogo~~ Kommunisticheskogo soyuza
molodezhi neftepromyslovogo upravleniya Peschanyyneft' (for
A. Mamedov).
3. Morskoy promysel kommunisticheskogo truda
No.1 neftepromyslovogo upravleniya Peschanyyneft' (for Eynalov,
Nasrullayev, M. Mamedov, Gadzhiyev, El'darov, Dergachev).
(Peschanyy Island--Oil well drilling, Submarine)

MAMEDOV, M.

Photoresistance unit used as a light cutout in navigational equipment.
Mor.flot.16 no.8:27 Ag '56. (MLRA 9:10)

1. Starshiy inzhener Upravleniya gidrograficheskoy sluzhby Voenno-
morskikh sil.
(Ships' light) (Photoelectric cells)

MAMEDOV, L. K.

"A Study of the Process of Displacing Oil by Air From Porous Media."
Cand Tech Sci, Azerbaydzhan Industrial Inst imeni M. Azizbekov, 27 Dec 54.
(BR, 11 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

2873 Mamádov, L. K.

Izucheniye mekhanizma vytesneniya nefiti vozdukhom iz poristoy sredy. (Po printsipu gazonanornogo rezhima). Baku, 1954. 9 s. 21 sm. (M-vo vyssh. obrazovaniya SSSR. Azerbaydzh. ordena Trud. Krasogo Znameni industr. in-t im. M. Azizbekova). 100 Ekz. B. Ts. - (54-55731)

KHALILOV, A.D.; MAKAROV, Ye.S.; MAMEDOV, Kh.S.; P'YANZINA, L.Ya.

Crystalline structure of the minerals of the murmanite-lomonosovite group. Dokl. AN SSSR 162 no.1:179-182 My '65. (MIRA 18:5)

1. Institut khimii AN AzerSSR i Institut geokhimii i analiticheskoy khimii im. V.I.Vernadskogo AN SSSR. Submitted November 14, 1964.

MEKHTIYEV, K.M.; GAMIDOV, R.S.; MAMEDOV, Kh.S.; BELOV, N.V., akademik

Crystalline structure of the Bi-molybdate $\text{Bi}_2[\text{MoO}_4]_3$. Dokl. AN
SSSR 162 no.3:563-564 My '65. (MIRA 18:5)

1. Institut khimii AN AzerbSSR.

KHALILOV, A.D.; MAMEDOV, Kh.S.; MAKAROV, Ye.S.; P'YANZINA, L.Ya.

Crystalline structure of manganite, Dokl. AN SSSR 161 no.6:
1409-1411 Ap '65. (MIRA 12:5)

1. Institut khimii AN AzerSSR i Institut geokhimii i analiticheskoy khimii im. V.I.Vernadskogo AN SSSR. Submitted November 14, 1964.

ABDULLAYEV, G.K.; MAMEDOV, Kh.S.

Crystal structure of the complex compound tetraamodimono-
ethanolamine cuprosulfate $[\text{Cu}(\text{HOCH}_2\text{CH}_2\text{NH}_2)_2(\text{H}_2\text{O})_4]\text{SO}_4$
Zhur. strukt. khim. 6 no.1:171-172 Ja-F '65.

(MIRA 18:12)

1. Institut khimii AN Azerbaydzhanskoy SSR. Submitted July
16, 1964.

ABDULLAYEV, G.K.; MAMEDOV, Kh.S.

Crystalline structure of magnesium diborate. Azerb.khim.zhur.
no.4:101-104 '65. (MIRA 18:12)

1. Institut khimii AN AzSSR. Submitted July 2, 1964.

AMIROV, S.T.; MAMEDOV, Kh.S.

Possible three-dimensional condensates of wollastonite chains
(W-frameworks). Azerb. khim. zhur. no. 2:115-120 '65.
(MIRA 18:12)

1. Institut khimii AN AzerSSR. Submitted August 20, 1964.

MEKHTIYEV, K.M.; MAMEDOV, Kh.S.

X-ray diffraction study of a phosphorus-molybdenum-bismuth catalyst.
Dokl. AN Azerb. SSR 20 no.1:27-29 '64. (MIRA 17:4)

1. VNIIOLEFIN i OZ. Predstavleno akademikom AN AzerSSR M.A. Dalinym.

MAMEDOV, Kh.S.; BELOV, N.V.

Structural analogy (isostructural nature) between diorthosilicates
and orthoborates. Geokhimiia no.11:1087-1096 N '64.

(MIRA 18:8)

GAMIDOV, R.S.; GOLOVACHEV, V.P.; MAMEDOV, Kh.S.; BELOV, N.V., akademik

Crystalline structure of hopeite $\text{Zn}_3 [\text{PO}_4]_2 \cdot 4\text{H}_2\text{O}$.
Dokl. AN SSSR 150 no.2:381-384 My '63. (MIRA 16:5)
(Hopeite)

KHEIROV, M.B.; MAMEDOV, Kh.S.; BELOV, N.V., akademik

Crystalline structure of rinkite $\text{Na}(\text{Ca}, \text{Ce})_2(\text{Ti}, \text{Ce})\text{O}$ $[\text{Si}_2\text{O}_7]$ P.
Dokl. AN SSSR 150 no.1:162-164 My '63. (MIRA 16:6)
(Rinkite)

Materials of the Scientific Conference (Cont.)	80V/6195
Activity and Structure of Cracking Catalysts	35
Melkonyan, L. G., and A. M. Zarafyan. Dependence of the Speed of Propagation of Ultrasound on the Structure of Molecules of Organic Liquids and on Their Physical Constants	48
Krmoyan, T. V. Study of the Electroconductivity of Concentrated Alkali Solutions	62
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Card 3/11	

Materials of the Scientific Conference (Cont.)

SOV/6195

COVERAGE: The book contains the results of research in physical, inorganic, organic, and analytical chemistry, and in chemical engineering, presented at the Scientific Conference held in Yerevan, 20 through 23 November 1957. Three reports of particular interest are reviewed below. No personalities are mentioned. References accompany individual articles.

TABLE OF CONTENTS:

PHYSICAL CHEMISTRY

Tsitsishvili, G. V., and Ye. D. Rosebashvili. Use of the Magnetic Method in Studying Some Complex Cobalt Compounds 5

Nanobashvili, Ye. M., and L. V. Ivanitskaya. The Effect of γ -Radiation on Colloidal Solutions of Gallium, Indium, and Thallium Sulfide 23

Zul'fugarov, Z. G., V. Ye. Smirnova and S. G. Muradova. The Effect of the Conditions of Synthesis and Formation on the Card 2/11

MA MEDOV, K.H.S.

PHASE I BOOK EXPLOITATION

JUN 25 1963

SOV/6195

Nauchnaya konferentsiya institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR. Yerevan, 1957.

Materialy nauchnoy konferentsii institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR (Materials of the Scientific Conference of the Chemical Institutes of the Academies of Sciences of the Azerbaydzhani, Armenian, and Georgian SSR) Yerevan, Izd-vo AN Armyanskoy SSR, 1962. 396 p. 1100 copies printed.

Sponsoring Agency: Akademiya nauk Armyanskoy SSR. Institut organicheskoy khimii.

Resp. Ed.: L. Ye. Ter-Minasyan; Ed. of Publishing House: A. G. Slikuni; Tech. Ed.: G. S. Sarkisyan.

PURPOSE: This book is intended for chemists and chemical engineers, and may be useful to graduate students engaged in chemical research.

Card 1/11

AKHUNDOV, Yu.A.; MAMEDOV, Kh.S.; BELOV, M.V., akademik

Crystalline structure of brandisite. Dokl. AN SSSR 137 no.1:167-
170 Mr-Ap '61. (MIRA 14:2)

1. Institut khimii Akademii nauk AzerSSR.
(Kedabek District--Seybertite)

MAKHOV, Kh.S.

Some data on structural investigations conducted by the
chemical Institute of the Academy of Sciences of the
Azerbaijani S.S.R. Trudy Inst.khim.AN Azerb.SSR 19:61-70
'61. (MIRA 14:10)

(Chemical structure)

GAMIDOV, R.S.; MAMEDOV, Kh.S.

Crystalline structure of biphenyl ether of ethylene glycol.
Azerb.khim.zhur. no.5:125-131 '61. (MIRA 15:5)
(Ethylene glycol) (Ethers) (Crystallography)

MAMEDOV, Kh.S.

Crystal chemistry of binding agents. Azerb.khim.zhur. no.2:105-
116 '61. (MIRA 14:8)
(Calcium silicate)

GAMIDOV, R.S.; MAMEDOV, Kh.S.

Structure of vivianite and its derivatives. Azerb.khim.zhur,
no.4:121-125 '60. (MIRA 14:8)
(Vivianite)

MAMEDOV, Kh. S.

~~"~~g-k-p~~~~ The Crystal Structure of Brandisit."

Inst. of Chemistry, Toistoj Street, 142, Baku, USSR.

paper ~~g-k-p~~ submitted for 5th Gen. Assembly, Symposium on Lattice Defects, Intl. Union of Crystallography, Cambridge U.K. Aug 1960.

MAMEDOV, Kh.S.

[Crystallochemistry of calcium silicates and hydrosilicates]
Kristallokhimiia silikatov i gidrosilikatov kal'tsifa. Baku,
Izd-vo Akad.nauk Azerbaidzhanskoi SSR, 1960. 126 p.
(Calcium silicate) (MIRA 13:7)

On Wöhlerite-Lovenite and Rinkite Mosandrite Groups

SOV/20-126-2-42/64

be more convenient. This modification is characteristically expressed by the projection-surface of the cell which is nearly the same if slight differences in the length of the axis are not taken into account. In real minerals (Table 1) above all the composition changes. There are 4 figures, 1 table, and 8 references, 7 of which are Soviet and 1 German.

ASSOCIATION: Institut khimii Akademii nauk AzerbSSR (Institute for Chemistry of the Academy of Sciences of the Azerbaijan SSR)
Institut kristallografii Akademii nauk SSSR (Institute for Crystallography of the Academy of Sciences, USSR)

SUBMITTED: February 26, 1959

Card 3/3

On Wöhlerite-Lovenite and Rinkite Mosandrite Groups SOV/20-126-2-42/64

structure (Figs 4, 5) proved that cuspidine should be placed on top of the Wöhlerite-Lovenite-group. In the essential work on the cuspidine and other purely mineralogical publications much space was devoted to its close structural connection with another Ca-silicate, the tillite. By means of geometrical analysis of this simplest Ca-silicate there was determined an infinite mineralogical radical - the tillite band which all minerals have in common (Fig 1). With the aid of this band such an important compound as tricalciumsilicate-hydrate (Ref 8) is for cement-chemistry, could simply be "put together" and a structural solution could be found. A second interesting result obtained in consequence of the tillite band determination is the aforementioned geometrical (structural) difference between both mineral groups, mentioned in the title. Hence further (rational) combination of both these groups, which are already connected by a common type-formula is necessary. From figures 2-4, one may see that the minerals of the Cuspidine-Wöhlerite-Lovenite group are (at least from the geometrical standpoint) only a polymorphous modification of the mineral group Seydhozerite-Rinkite. Perhaps in this case the term polytypical modification would

Card 2/3

3 (8)

AUTHORS: Mamedov, Kh. S., Simonov, V. I., SOV/20-126-2-42/64
~~Belov, N. V., Academician~~

TITLE: On Wöhlerite-Lovenite and Rinkite Mosandrite Groups
 (O gruppakh velerita-lovenita i rinkita-mozandrita)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 2,
 pp 379-381 (USSR)

ABSTRACT: The 2 groups named in the title followed each other in modern text-books (Refs 1, 2) and in mineralogical tables (Ref 3). Despite a somewhat closely-connected type-formula, they differ greatly with respect to their shape and the parameters of the elementary cells. The recently published results of an exhaustive investigation of the Zr,Ti-silicate of Lovozero - the Seydhozerite (Refs 4, 5) change the mineralogical picture considerably. This mineral was placed by its discoverer (Ref 6) into the Wöhlerite-Lovenite group (ZrO_2 -content = 23 %). According to röntgenometrical data it doubtlessly belongs to the Rinkite group. Moreover, this mineral should because of its ideal structure be placed on top of the Seydhozerite-Rinkite-group. The same test of the

Card 1/3

On the Crystalline Structure of the Tricalcium
 Silicate Hydrate TSH = $6\text{CaO} \cdot 2\text{SiO}_2 \cdot 3\text{H}_2\text{O} = \text{Ca}_6[\text{Si}_2\text{O}_7](\text{OH})_6 =$ SOV/20-126-1-41/62
 $= \text{Ca}_4[\text{Si}_2\text{O}_7](\text{OH})_2 \cdot 2\text{Ca}(\text{OH})_2$

the TSH structure is pseudohexagonal, similarly to anhydrous tricalcium silicate. The authors of reference 5 are therefore rather wrong when they insist on a true hexagonality of TSH. This is confirmed as well by the thermogram. There are 3 figures, 1 table, and 6 references, 4 of which are Soviet.

ASSOCIATION: Institut khimii Akademii nauk AzerbSSR (Institute of Chemistry of the Academy of Sciences, Azerbaydzhan SSR)
 Institut kristallografii Akademii nauk SSSR (Institute of Crystallography of the Academy of Sciences, USSR)

SUBMITTED: February 26, 1959

On the Crystalline Structure of the Tricalcium Silicate Hydrate TSH = $6\text{CaO} \cdot 2\text{SiO}_2 \cdot 3\text{H}_2\text{O} = \text{Ca}_6[\text{Si}_2\text{O}_7](\text{OH})_6 =$ SOV/20-126-1-41/62
 $= \text{Ca}_4[\text{Si}_2\text{O}_7](\text{OH})_2 \cdot 2\text{Ca}(\text{OH})_2$

It seems that the latter strengthen the structure since they lie one behind the other. In the structure of tillite itself the tillite bands are not fused, they are related to one another by additional CO_3 -groups. This demands the

introduction of an additional Ca-octahedron as well, so that the formula will be $\text{Ca}_4[\text{Si}_2\text{O}_7]\text{CO}_3 \cdot \text{CaCO}_3$ (Fig 2). In 1958

(Ref 6) new data on the hydrothermal synthesis of the substance mentioned in the title (TSH) were published and a formula suggested. If the formula of the tillite band is reduced from the formula of TSH 2 portlandite molecules $\text{Ca}(\text{OH})_2$ are obtained. It is assumed that these were replaced in the formula to the "side chain" outside the cuspidine nucleus (Table 1). They form a third layer with their 4 OH particles which links the tillite bands (with 2 layers). The additional Ca-octahedra (Fig 3) which replace the CO_3 groups in tillite are placed here as well. The authors draw the conclusion that

Card 3/4

On the Crystalline Structure of the Tricalcium Silicate Hydrate TSH = $6\text{CaO} \cdot 2\text{SiO}_2 \cdot 3\text{H}_2\text{O} = \text{Ca}_6[\text{Si}_2\text{O}_7](\text{OH})_6 =$
 $= \text{Ca}_4[\text{Si}_2\text{O}_7](\text{OH})_2 \cdot 2\text{Ca}(\text{OH})_2$ SOV/20-126-1-41/62

The variety of the motives to which this group belongs in the Ca-silicates is considerably limited by a certain inertia of the diorthotic groups and the existence of only one direction with a dimension of 3.7 Å (height of the group) (Figs 1:1 cursive). Thus a "tilleite band" occurs in both initially mentioned Ca-silicates as a mineralogical radical (Figs 1. 1). Figure 1 shows that a part of the tilleite band consists of 8 octahedra and two $[\text{Si}_2\text{O}_7]$ groups. The 14 O-atoms of the two last groups are, however, not sufficient to counterbalance the cation charges. This is compensated (according to Ref 5) by additional anions F, OH in the cuspidine structure. The latter consists completely of tilleite bands of a most simple formula: $\text{Ca}_8[\text{Si}_2\text{O}_7]_2(\text{F}, \text{OH})_4 = 2\text{Ca}_4[\text{Si}_2\text{O}_7](\text{F}, \text{OH})_2$.

The second variant of the two most simple geometrical solutions for such a formula is realized in nature. In this case the members of Ca-octahedra of a tilleite band continue one another in forming somewhat longer 4-membered members.

Card 2/4

3 (8)

AUTHORS:

Mamedov, Kh. S., Klevtsova, R. F.,
Belov, N. V., Academician

SOV/20-126-1-41/62

TITLE:

On the Crystalline Structure of the Tricalcium Silicate Hydrate
TSH = $6\text{CaO} \cdot 2\text{SiO}_2 \cdot 3\text{H}_2\text{O} = \text{Ca}_6[\text{Si}_2\text{O}_7](\text{OH})_6 = \text{Ca}_4[\text{Si}_2\text{O}_7](\text{OH})_2 \cdot$
 $\cdot 2\text{Ca}(\text{OH})_2$ (O kristallicheskoj struktury gidrata
trekhkal'tsiyevogo silikata TSH = $6\text{CaO} \cdot 2\text{SiO}_2 \cdot 3\text{H}_2\text{O} =$
 $\text{Ca}_6[\text{Si}_2\text{O}_7](\text{OH})_6 = \text{Ca}_4[\text{Si}_2\text{O}_7](\text{OH})_2 \cdot 2\text{Ca}(\text{OH})_2$)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 1,
pp 151-154 (USSR)

ABSTRACT:

The investigation of the cuspidine structure (Ref 1) became
an important step towards further investigations of several
Ca-silicates, above all of wollastonite and xonotlite (Ref 3).
The main peculiarity of cuspidine and of the investigated
structure of tilite (Fig 1) was, compared to the Mg(Fe)- and
Al-silicates, the rôle which the $[\text{SiO}_4]$ -tetrahedrons play in
the latter and which is played by the diorthotic groups $[\text{Si}_2\text{O}_7]$
in the Ca-silicates with respect to geometrical reasons.

Card 1/4

AKHUNDOV, Yu.A.; MAMEDOV, Kh.S.

Space group and parameters of the brandizite crystal lattice.
Azerb.khim.zhur. no.1:31-33 '59. (MIRA 13:6)
(Xanthophyllite)

The Crystal Structure of Hillebrandite

SOV/20-123-4-47/53

calcium-cation layer both above and below, while in xonotlite the calcium-cation layer always belongs to both central layers of Si_6O_{17} chains. From this scheme it can be seen that the perfect cleavage (001) runs through the middle of the portlandite layer which has become a constituent part of the hillebrandite. There are 1 figure and 6 references, 5 of which are Soviet.

ASSOCIATION: Institut khimii Akademii nauk AzerbSSR (Chemistry Institute of the Academy of Sciences of the Azerbaydzhanskaya SSR)
Institut kristallografii Akademii nauk SSSR (Crystallography Institute, Academy of Sciences, USSR)

SUBMITTED: August 1, 1958

Card 3/3

The Crystal Structure of Hillebrandite

SOV/20-123-4-47/53

predominant product produced by hydrothermal synthesis through temperature decrease (pot sediment) (Ref 6). It precipitates easily with a surplus of Ca(OH)_2 and even builds an oriented intergrowth with the latter. It is an arcicular and at the same time platy mineral. However, hillebrandite distinguishes itself markedly from okenite and tobermorite, primarily because it cannot be changed to oriented wollastonite through thermal treatment (Ref 5). Two of the 3 cell parameters agree exactly with those of xonotlite (Ref 5). This paradox - that is the undoubted role of xonotlite in the wollastonite reaction and the non-inversion of hillebrandite to wollastonite by thermal treatment - can easily be explained if 2 subtractions are made. If (a) the basic molecule of xonotlite is removed from the formula of hillebrandite and (b) the 2 unequal parameters, c, are subtracted, the results show that the hillebrandite cell is made of alternating layers of xonotlite and portlandite (Fig 1). This cannot be taken literally, however, for hillebrandite when compared with xonotlite has the following characteristics: the central sheet with 2 chains, $/\text{Si}_{17}\text{O}_{17}/$, contains its "own"

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ABSTRACT:

A considerable number of calcium silicates invert to fibrous β -wollastonite (CaSiO_3) at 700-800°. These fibers are oriented parallel to the b axis ($b=2 \cdot 3.65 \text{ \AA}$) which is common to the wollastonite and original silicate. From the authors' works (Refs 1-3) it is seen that wollastonite chains ($3/\text{SiO}_3/\infty = / \text{Si}_3\text{O}_9/\infty$) are not the primary structural blocks in hydrothermal synthesis (either natural or artificial) of calcium (hydro)-silicates. These blocks are much more complex chains which originate by doubling of the wollastonite chains ($/\text{Si}_6\text{O}_{17}/^{10-}$). These latter have been designated xonotlite chains (Ref 1). In the calcium (hydro)-silicate minerals they are present either unchanged (Refs 2,3) or condense to lattices (Refs 2,4). Hillebrandite is a characteristic and

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b of the Lokh-Eynort tobermorite are proven to be a repetition of the xonotlite parameter with a c parameter which amounts to three-fold. There are 2 figures and 9 references, 3 of which are Soviet.

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$n_3(\text{SiO}_3)$ then the double silicon-oxygen chains from xonotlite, $(\text{Si}_6\text{O}_{17})_\infty$ (Ref 8) serve to generate in the hydrothermal syntheses of Ca-silicates. These chains are discrete in xonotlite itself. In okenite the double chains are no longer discrete and intertwine in a parallel manner, but about a half period $\frac{1}{2}$ displaced, that is, displaced along the chain axis. Okenite nets are entirely flat in talc and also in mica. In tobermorite the okenite bonds are shoved over each other on swelling (Fig 1). Figure 1 shows an approximate localization of the Si-tetrahedra, 12 of which occur in every sheet (4 overlapping and 4 single pairs) and of the 20 cations of Ca (10 overlapping pairs); all 12 hydroxle groups, OH, (per whole cell) occur under non-covering O atoms in the horizontal bonds of the xonotlite rings. The position of the 16 (per cell) inter-layer H_2O is more difficult to determine.

The paradox of the Lokh-Eynort tobermorite is satisfactorily eliminated if the electronogram (of Ref 2) is studied. The period here clearly shown is not $2.5,5 = 11 \text{ \AA}$, as in normal tobermorites, but $3.5,5 = 16,5 \text{ \AA}$. Thus the parameters a and

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